

Title of contribution: Impact of merger/ringdown on SMBHB parameter estimation with LISA

Session: P2

Abstract:

The Laser Interferometer Space Antenna (LISA) will measure gravitational waves from the inspiral and merger of supermassive black hole binaries (SMBHBs) at high redshift with large signal to noise. These measurements will allow extraction of the SMBHB parameters (component masses, spins, binary orbital parameters, sky location, and distance) with exquisite accuracy. Here we present a study of the impact on measured parameter precision from the inclusion of accurate waveforms for the merger/ringdown portion of the signal. We focus specifically on sky-position and luminosity distance, the most important parameters for constraining searches for potential electromagnetic counterparts to SMBHB merger events.